



Annual Review for Digital Production Example Library (DPEL)



Digital Production Example Library (DPEL)

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Brief Description:

A library of digital assets - 3D scenes, digital cinema footage, etc. - that demonstrate the scale and complexity of modern feature film production, including computer graphics, visual effects and animation. Curated by the Academy Software Foundation, these assets are available free of charge to researchers and developers of both open source and commercial projects, to test, demonstrate, and inspire their ideas.

TSC Chairperson:

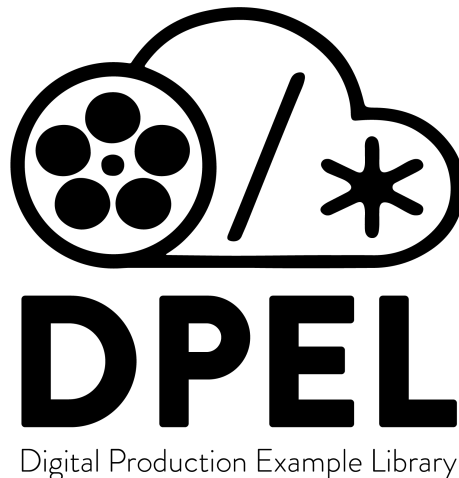
Matthew Low, DreamWorks Animation, matthew.low@dreamworks.com

TSC Members and Affiliations:

- *Christian López Barrón* - Netflix Animation Studios
- Eric Enderton - NVIDIA
- Haley Kannall - Amazon Web Services
- *Joan Panis* - Autodesk
- Michael Johnson - Apple
- Nick Porcino - Pixar
- Satish Goda - Netflix Animation Studios

Contributed by:

ASWF as originator, with major contributions from:
Adobe, ASC, AWS, DWA, Intel, NAS, NVIDIA



Key Links:

Website:

<https://dpel.aswf.io/>

Github:

<https://github.com/DigitalProductionExampleLibrary>

Artwork:

<https://artwork.aswf.io/projects/dpel/>

Mailing lists:

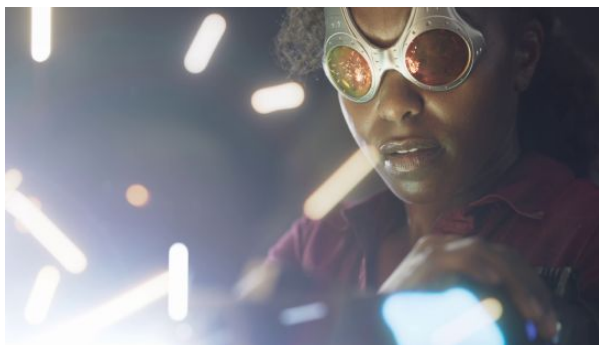
- assets-discussion@lists.aswf.io
- assets-submissions@lists.aswf.io
- #assets Channel in ASWF Slack

OpenSSF Best Practice Badge URL:

<https://www.bestpractices.dev/en/projects/8737/passing>

DPEL Assets

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License

ASWF Digital Assets License v1.1

License for <Asset Name> (the “Asset Name”).

<Asset Name> Copyright <Year> <Asset Owner>. All rights reserved.

Redistribution and use of these digital assets, with or without modification, ***solely for education, training, research, software and hardware development, performance benchmarking*** (including publication of benchmark results and permitting reproducibility of the benchmark results by third parties), ***or software and hardware product demonstrations***, are permitted provided that the following conditions are met:

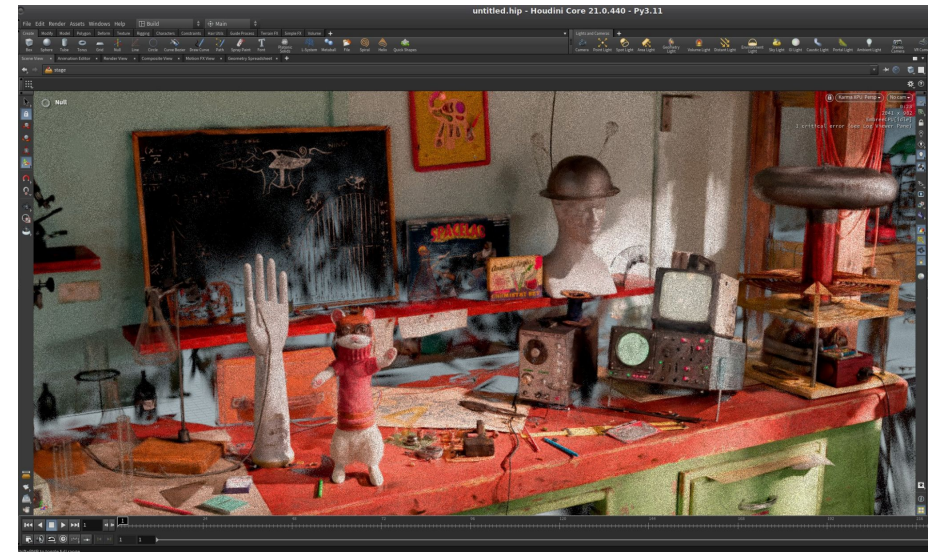
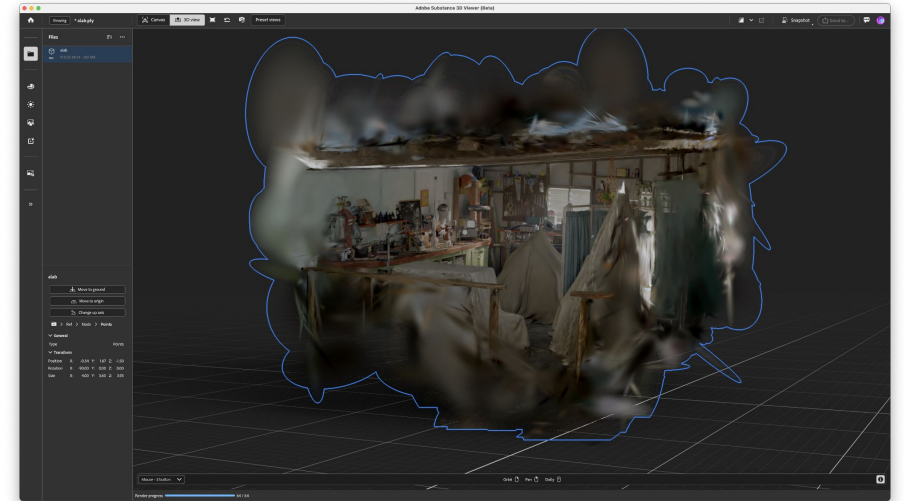
...

https://aswf.io/licenses/aswf_digital_assets_license_v1.1.txt

ALab – Gaussian Splats

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- **Gaussian Splat** variant of **ALab** asset
- Developed by **Netflix Animation Studios**
- Contains original **PLY** and derived **USD**
- Coordinated with development of new UsdVol **ParticleField Schema domain** and renderer from AOUSD and Apple
- Also provides source SDR/HDR renders and **COLMAP** data



ASC StEM v3

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- Reference material for **Virtual Production / ICFVFX**
- From ASC MITC **Joint Committee on Virtual Production**
- Mix of **2D & 3D assets** and **short film**
- Contributions from **numerous studios**
- Shot at Amazon Studios Los Angeles



MaterialX Teapot and Lion

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- Reference production **MaterialX** assets
- Contributed by **NVIDIA**
- Demonstrates modular **multi-layer** networks with blended inter-layer effects using **standalone BSDFs**
- Originally authored to showcase **neural materials**
- **Released yesterday!**



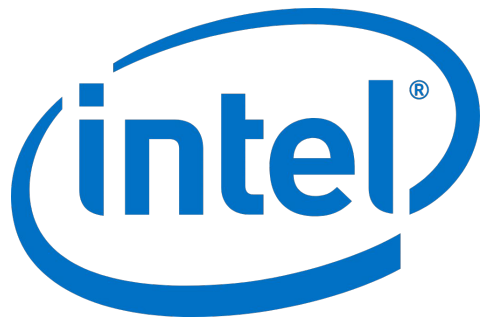
Contributing Organizations

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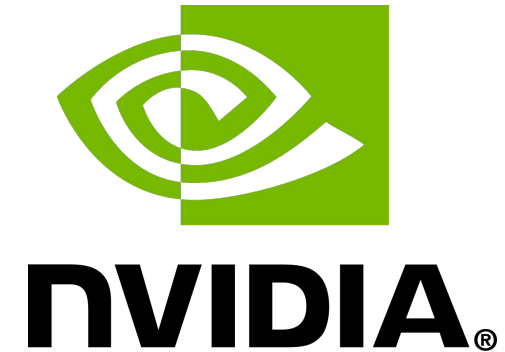
Adobe



aws



NETFLIX
ANIMATION
STUDIOS



 **AUTODESK**



PIXAR

Contributions

 Digital Production Example Library (DPEL)

Sep 15, 2025 → Sep 15, 2026

Contributors leaderboard

All activities and collaborations

Contributor	
	Matthew Low
	Akhil Mittal
	akhil-mitt
	Christian Barrón
	Arnon Marcus
	chrizzftd
	Prathik Karanth
	Andrea Machizaud
	akhil-mitt
	Darin Grant

 Digital Production Example Library (DPEL)

Sep 15, 2025 → Sep 15, 2026

Active contributors

Total contributions

20

82.5% (-94)

 vs. 114 last period

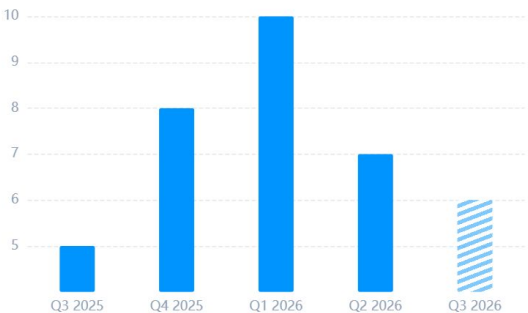
Maintainers

0

Reviewers

4

quarterly active contributors



 Digital Production Example Library (DPEL)

Sep 15, 2025 → Sep 15, 2026

Active organizations

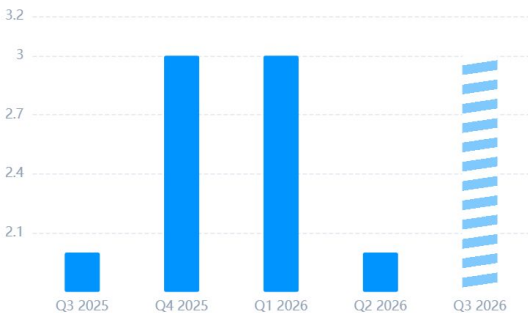
Total contributions

7

89.2% (-58)

 vs. 65 last period

quarterly active organizations



 Digital Production Example Library (DPEL)

Sep 15, 2025 → Sep 15, 2026

Commit Activities

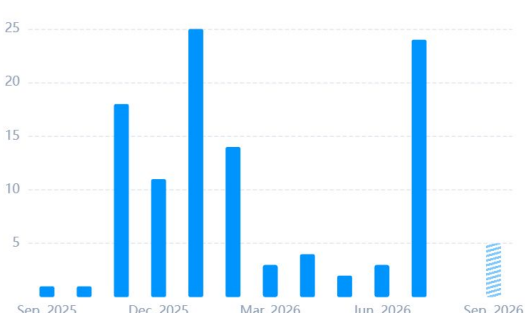
Total contributions

111

17.8% (-24)

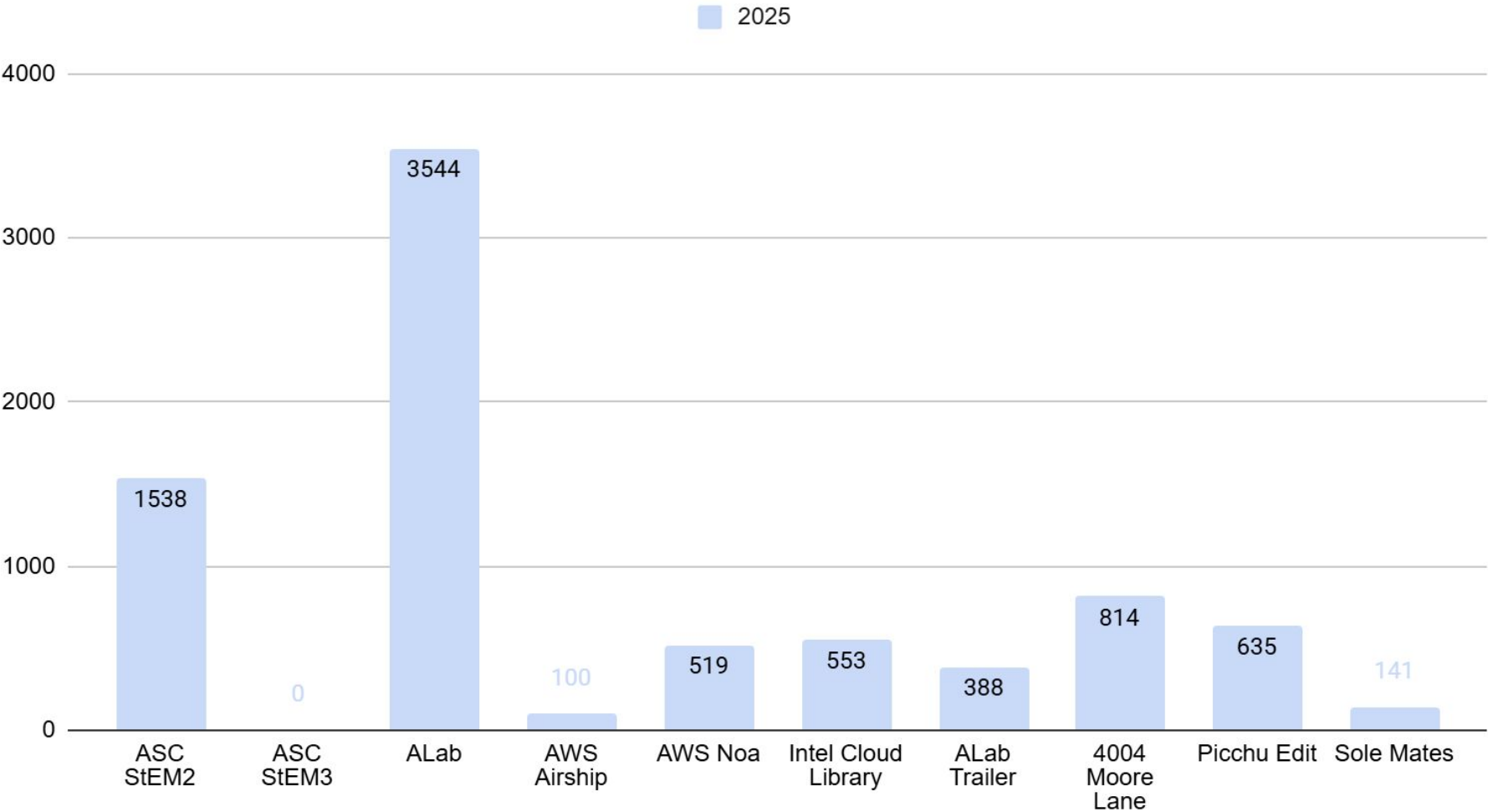
 vs. 135 last period

monthly new commits



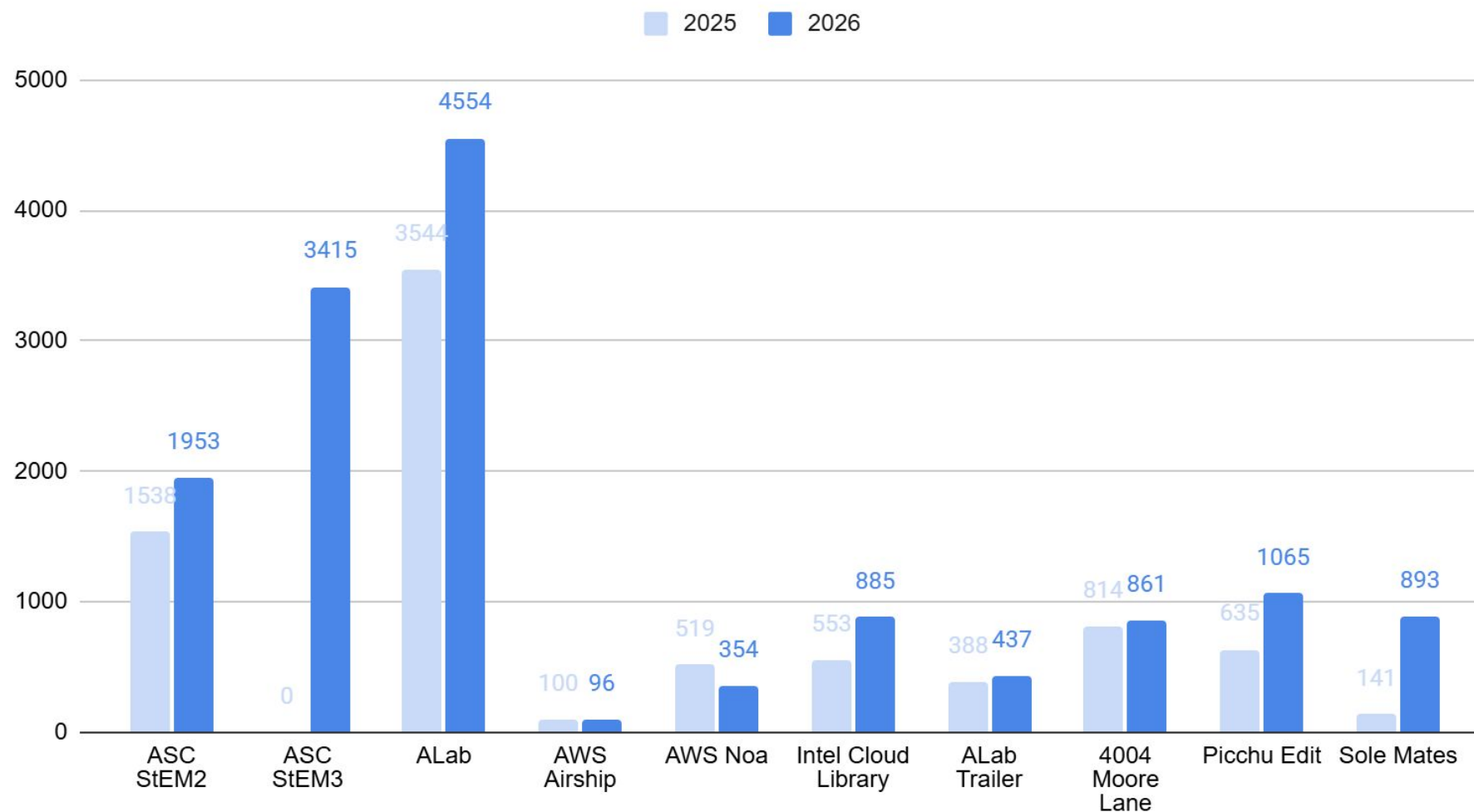
Downloads

DPEL Asset Downloads (2025)



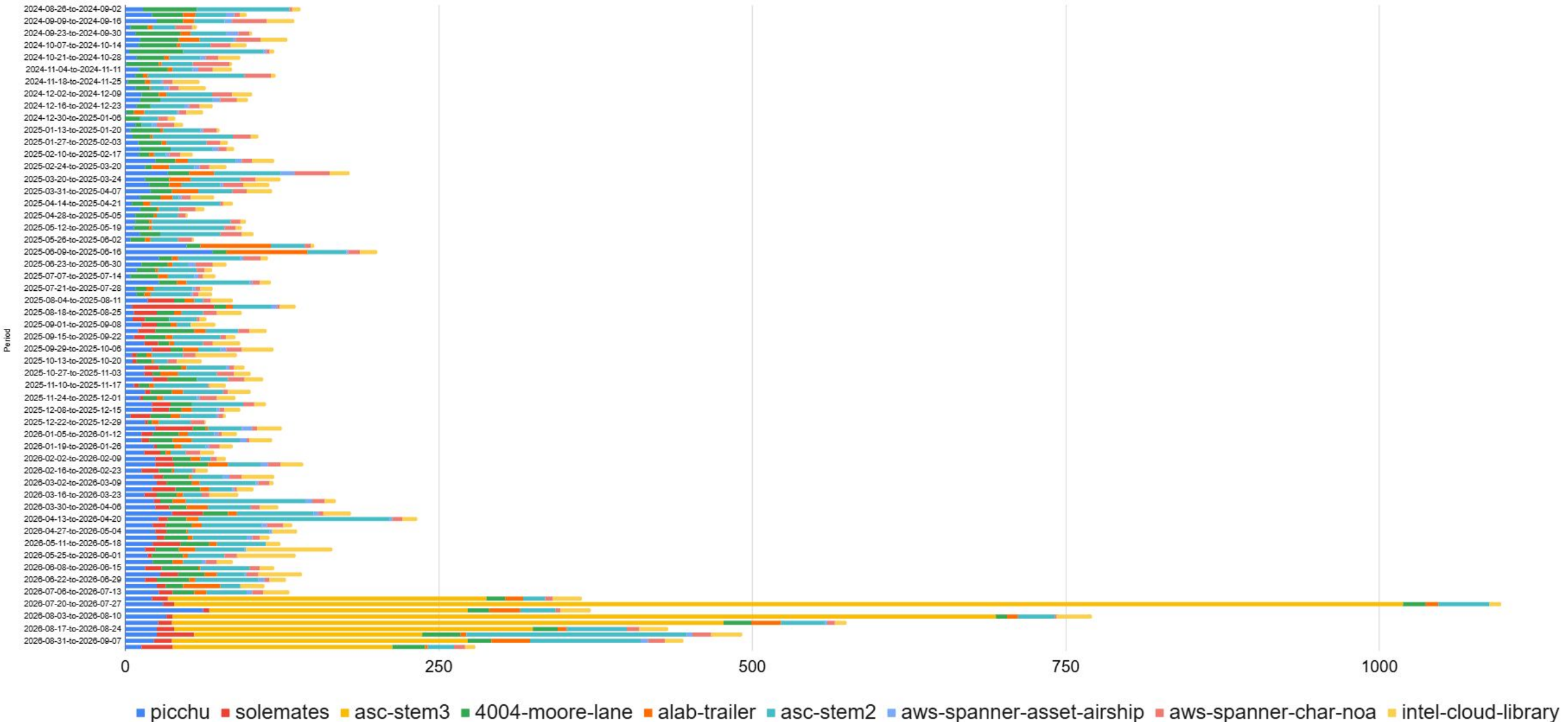
Downloads

DPEL Asset Downloads (2026)



Downloads

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Spotlight: DPEL in the Wild

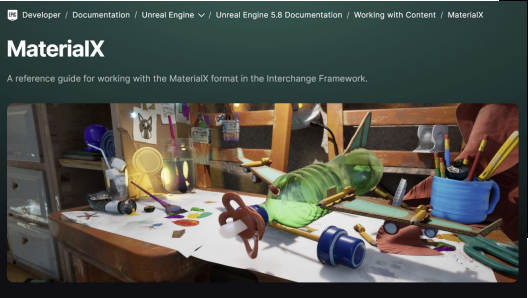
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OpenPBR: Novel Features and Implementation Details

JAMIE PORTSMOUTH, Autodesk
PETER KUTZ, Adobe
STEPHEN HILL, Lucasfilm

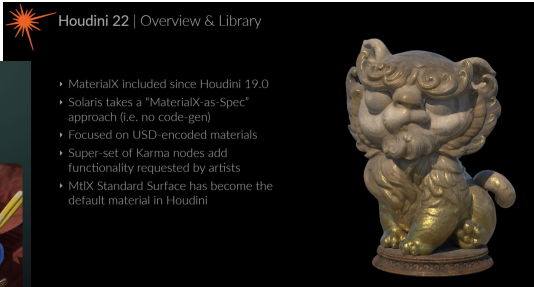


Figure 1: OpenPBR materials rendered in two separate systems (Arnold left, and Adobe's proprietary renderer right).

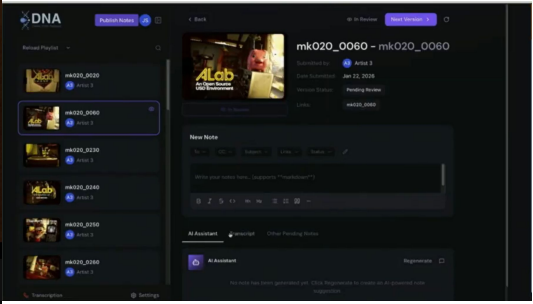
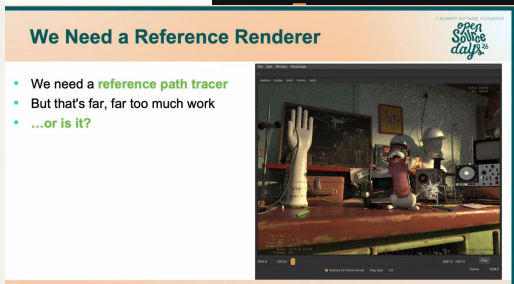
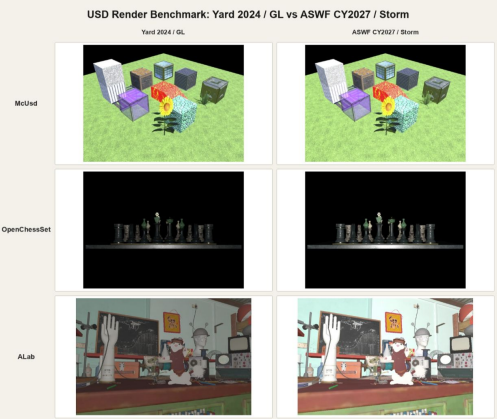
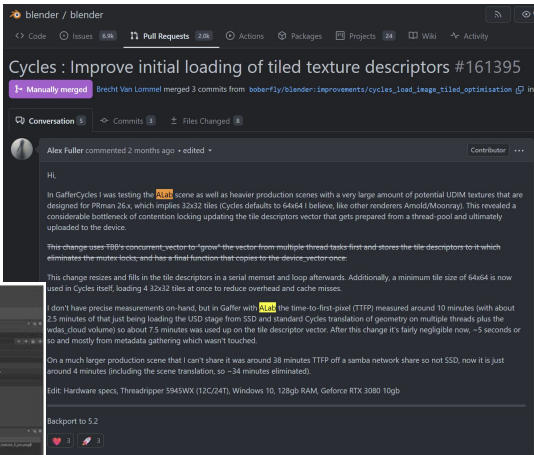
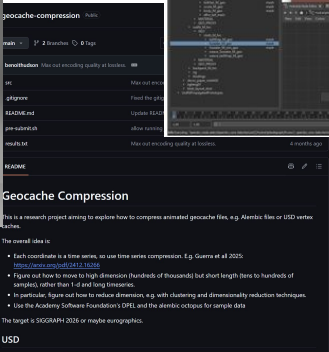


Outlook

- ✓ Full OpenPBR v1.1.1 support planned for Blender 5.4
 - Adding support for upcoming OpenPBR versions
- ✓ Collaborating with the community to unify OpenPBR appearance
- ✓ Continuing MaterialX GSoC project
 - Working towards an initial experimental feature integration



- MaterialX included since Houdini 19.0
- Solaris takes a "MaterialX as-Spec" approach (i.e. no code-gen)
- Focused on USD-encoded materials
- Super-set of Karma nodes add functionality requested by artists
- Mix Standard Surface has become the default material in Houdini



VFX Industry Build Matrix Updates

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VFX industry build matrix										
	Last update (name/date)	Active VFX Platform Years	glibc	gcc	clang	MSVS	C++ standard	CMake	Python	Python bindings
Open source packages										
Alembic				6.3+	7+	2017, 2019 (maybe 2022)	11, 14, 17	3.13+	2.7, 3.7, 3.9	boost python 1.55+
AliceVision										
Cortex										
Embree										
Gaffer		2022	2.17	9.3.1	-	-	17	-	2.7, 3.7	boost python
MaterialX	Jonathan Stone / 2025-09-16	-	-	8 - 14	5 - 18	2017 - 2022	17	3.26+	3.9+	pybind11
Meshroom										
Open Shading Language (1.14)	Larry Gritz / 2026- 01-16	2022+		9-14	10(or maybe earlier)- current	2017, 2019, 2022	17	3.19+	3.9-3.13	pybind11 2.7-current
OpenAssetIO		2022	-	-	-	-	17	3.21	3.9+	pybind11 2.81+ (priva
OpenColorIO		2019+		6.3.1+	7+	2019, 2022	11, 14, 17	3.13+	2.7, 3.7+	pybind11 2.9.2+
OpenCue										
OpenEXR & Imath (3.2)				6-12	maybe earlier) -	2017, 2019, 2022	14	3.12+	2.7, 3.7, 3.9	boost python
OpenFX	Gary Oberbrunn 2026-0304	2022+		9-14	10(or maybe earlier)- current	2017, 2019, 2022	17, 20	3.18+	3,9+	-
OpenImageIO (3.1)	Larry Gritz 01-16	2022+		9-14	10(or maybe earlier)- current	2017, 2019, 2022		3.18+	3.9-3.13	pybind11 2.7-current
OpenPype		2022							3.7, 3.9	
Open RV	Bernard La 2025-10-06	2024	2.28	11.2.1	14.0.3	2017, 2019, 2022	17	3.31.7	3.11.9	3.11.0
OpenSubdiv										
OpenTimelineIO		2020-2023		6.3.1, 9.3	3.4+, Apple Clang 12	2017, 2019, 2022	14	3.18.2+	3.7-3.10	pybind11 current
OpenVDB (10.0)		2021+		9.3.1	10-14	2017, 2019, 2022		3.18+	2.7, 3.7+	boost python
Partio										
Ptex		2019+		4.8 -	3.3 - 14	2017+	98 - 17+	3.8+		
RawtoACES	Anton Dukhovnikov / 2025-09-17	2022-2024		9-	11+	2017+	17	3.12+	-	-

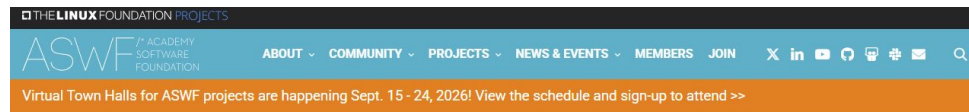
Project Engineering Contributions

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ASWF Project Engineering Contribution Matrix					
File Edit View Insert Format Data Tools Gemini Extensions Help					
4:4 DPEL					
	A	B	C	D	E
1	Project	Which organizations do you believe have at least one person spending at least 20% of their work time contributing directly to the project? (See attached note for a full explanation.)	What % of the project's tactical needs/goals are currently being met? (See attached note for a full explanation.)	What % of the project's strategic needs/goals are currently being met? (See attached note for a full explanation.)	Last updated: date + person
2	ACES	Academy	3%	3%	Scott Dyer 2026-07-08
3	Dailies Notes Assistant (DNA)	ILM, Sony Imageworks	75%	75%	Tommy Burnette 2025-09-08
4	DPEL	DreamWorks Animation, ASC, Netflix Animation, NVIDIA	60%	60%	Matthew Low 2026-09-14
5	MaterialX	Lucasfilm, Apple, Autodesk, NVIDIA	80%	70%	Jonathan Stone 2025-09-01
6	MoonRay	DreamWorks Animation	50%	60%	Jon Lanz 2026-06-16
7	Open Shading Language (OSL)	Sony Pictures Imageworks, Intel, Netflix Animation, NVIDIA	60%	40%	Larry Gritz 2025-09-01
8	OpenAPV				
9	OpenAssetIO				
10	OpenColorIO	Autodesk, DNEG, Skydance Animation	50%	50%	Carol Payne - 2026-05-27
11	OpenCue	Sony Pictures Imageworks	90%	60%	Diego Tavares - 2025-09-02
12	OpenEXR (+ Imath)	ILM, Weta	75%	75%	Cary Phillips 2025-09-03
13	OpenFX		50%	50%	Gary Oberbrunner 2024-06-13
14	OpenImageIO	Sony Pictures Imageworks	70%	50%	Larry Gritz 2025-09-01
15	OpenQMC		80%	80%	Josh Bainbridge 2026-08-05

CI / Security / Marketing Updates

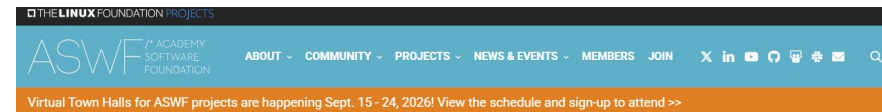
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[Blog](#) [DPEL](#)

DPEL Adds Sole Mates HDR Production Example Asset from Netflix Animation Studios

By Academy Software Foundation | December 10, 2025



[Announcements](#) [Blog](#) [DPEL](#) [Open Source Days](#)

American Society of Cinematographers (ASC) Contributes StEM3-VP Project to the Academy Software Foundation (ASWF) Digital Production Example Library (DPEL)

By Academy Software Foundation | July 19, 2026



New StEM3-VP digital assets help cinematographers stress-test and evaluate LED volumes for virtual production

AI / ML Code Generation Use / Reporting

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foundation / digital_assets / README.md

Preview Code Blame 69 lines (40 loc) · 5.85 KB

Raw Download Edit

Q2: The Licenses mention “training” in their lists of permitted uses. Does this refer to “training” an AI model?

A2: No. When the Licenses were developed, discussed and published by the ASWF community in 2021 and 2022, the word “training” was discussed in the context of human-based training. This is reflected in the fact that “training” appears immediately following “education.”

“Training” here was intended to permit use of assets distributed under these licenses, for example, to enable individual persons (even those employed by other companies) to experiment and work with the assets in connection with training and learning how to use software tools to manipulate those asset files.

This reflects the intent of the Licenses’ drafters. Training an AI model was not in scope for what the ASWF community had intended when drafting the Licenses.

Q3: So if I use assets provided under one of the Licenses to train an AI model, does that mean that I would be violating the license?

A3: Not necessarily. The answer here is likely going to depend on the specifics of your use case.

As described in A2 above, the ASWF community’s drafters of the Licenses did not intend that the word “training” was referring to AI model training. However, other parts of the license permission grant might independently permit training an AI model in some contexts.

For example, the Licenses also permit using the assets for *“research, software and hardware development, [or] performance benchmarking”* (in each case, subject to complying with the obligations in clauses 1 through 4). Training certain types of AI models *might* be permissible in these contexts. Potential examples could include training an AI model on the licensed assets for purposes such as:

- where the model’s outputs are used solely as part of testing or benchmarking one’s own software tools; or
- where the model’s outputs are entirely different in kind and nature from the original assets (e.g., generating outputs which have no reasonable possibility of re-creating the original assets or a meaningful substitute for them).

By contrast, using the assets to train an AI model is less likely to be permissible, if it generates outputs which are essentially functional equivalents of the inputs, or which essentially preserve and reproduce the assets’ underlying creative intent. For instance, if an AI model trained on assets received under the Licenses is capable of generating copies of or equivalent replacements for those assets, then it may be more likely to stretch beyond the intended scope of the Licenses’ permission grants.

Please be aware that, as of late 2025, several AI-related court cases are in process in various jurisdictions. Some of these may address whether a recipient of certain materials needs explicit permission to use them to train an AI model. This FAQ is not trying to answer that question. We’re only addressing our view of what the ASWF Digital Asset licenses themselves are intended to permit.

Finally, please keep in mind that we are unable to provide you with legal advice for your particular situation. If you are wondering whether your use case is on-sides or more likely to go beyond the Licenses’ scope, please consult your own legal counsel. The comments above are intended to reflect the general intent of certain members of the ASWF community, but this does not mean that every licensor using one of the Licenses will share these perspectives.

AI / ML Code Generation Use / Reporting

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C2
PA

content **credentials**

Future: VILLAIN

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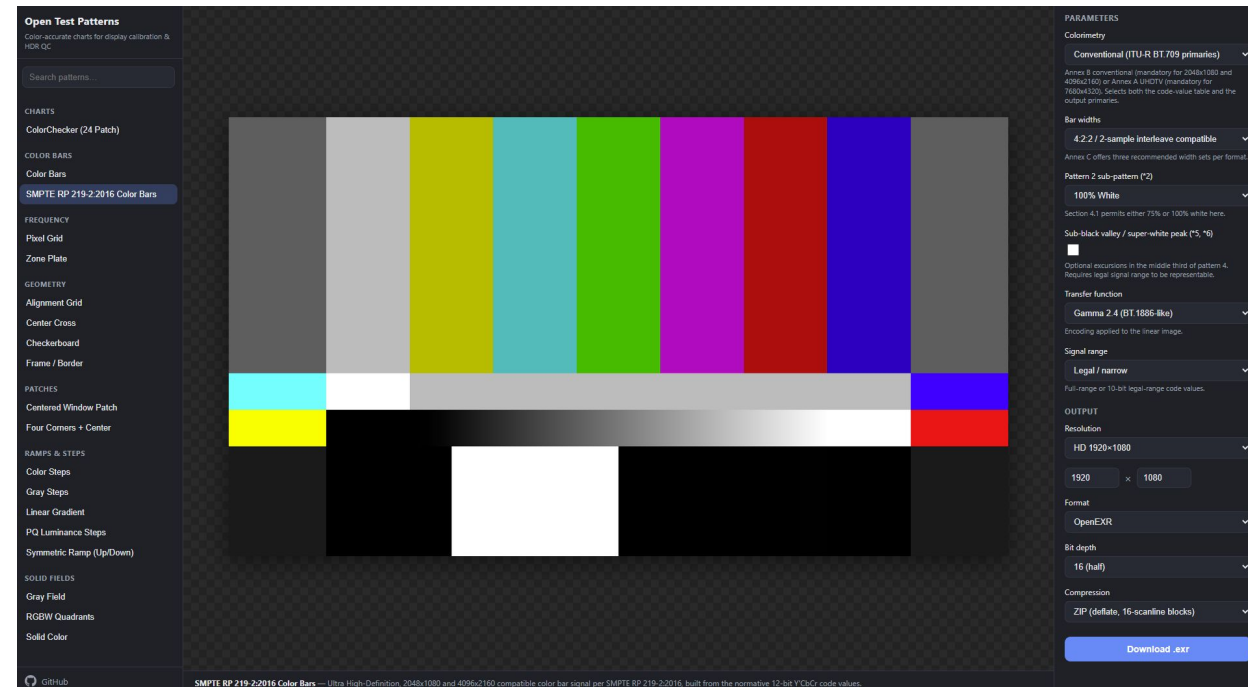
- **Production data** for live action short film, **VILLAIN**
- Written and directed by **Sparky Tehnsuko**
- Video and audio masters, Avid Media files, sound edits, titles, credits, score, VFX elements, preprod data, grade turnovers, various deliverables
- Interest from **Alliance for Open Media** (AV2 video encoding), academic institutions (compression perception), VFX houses (sample production data), **OpenTimelineIO** (live-action editorial data)



VILLAIN CREW FILES	POST PRODUCTION	Edit	"SHOT APPROVALS.pdf"						
			"VILLAIN Picture Lock Review.mov"						
			"Zz VILLAIN Directors Assembly ST FULL.mov"						
		Sound and Score	SCORE	Drafts			Various wav		
				20 Score Stems			WAV and M		
				Rough Ideas			Work in p		
				"Score.jpg"					
				JR - Villain			WAV exper		
		VILLAIN SOUND EDIT	Rushes Drive			Copied fol			
			Sound Ref Edited_0103			Various AA			
Villain Final Sound AAF			"220110 V						
"VILLAIN Directors Assembly ST Conf									
"VILLAIN Directors Assembly ST FULL									
VILLAIN CREW FILES	PRE PRODUCTION	Titles and Credits	Adobe After Effects Auto Save			Auto saved project files			
			CPI Ident 4x			Project files for Cowboy Futur Product			
			End Credits			Project files for Villain end credits			
		VFX	Main Title			Project files for Villain title sequence			
			CAVE			Image and Video files for review of mo			
			Mid Qrt Blocking Review			Notes and images from in progress rev			
			Various pull order documents						
			VILLAIN_DC_V1.0.0_VFX TURNOVER			"VILLAIN_DC_V1.0.0_Blu Screen Review			
					"VILLAIN_DC_V1.0.0_PULL ORDER.mov"				
					"VILLAIN_DC_V1.0.0_VFX REFS.mov"				
VILLAIN Dragon design			JPG examples of full colour and textur						
Various in progress notes, documents, images and videos describing and test									
"MIDAS dragonvfx_text.mov"									
VILLAIN CREW FILES	PRE PRODUCTION	Art	"VILLAIN Directors Assembly ST_V1_VFX Shots Ref Only.mov"						
			Design and reference drawings, documentation and photos for Production De						
			Ceiling						
			Hair & Makeup			Design and reference drawings and photos for Hair & Makeup			
			Health & Safety			Risk assessment paperwork			
		Locations	Photos and paperwork from scouting and contracting location for shoot						
			Production Office			Generic planning documentation and paperwork including script and shot list			
			VILLAIN CREW FILES	VILLAIN PRODUCTION FILES	Sound	VILLAIN SOUND TO	01_camera_masters	a_cam_ARRIRAW	RAW camera video files (in MXF format)
							02_audio_masters	(empty)	
							03_transcoded_material	Reduced filesize video files for DIT processing and playback on set	
04_reports	PDF reports of file sizes, lengths etc.								
05_cdr	N/A DIT files								
VFX	01_camera_masters	a_cam_ARRIRAW			RAW camera video files (in MXF format)				
	02_audio_masters	SD01_SD02			VILLAIN 20110				
	03_transcoded_material	Reduced filesize video files for DIT processing and playback on set							
	04_reports	PDF reports of file sizes, lengths etc.							
	Final Sound - Stereo Stems	Mixed stem audio files separated into dialogue, music and sound effects							
VILLAIN CREW FILES	VILLAIN PRODUCTION FILES	Sound	VILLAIN SOUND TO	Score	"Villain VS 02.01.22.mp3"				
				220111_VILLAIN_PICTURE_LOCK	220111_VILLAIN_PICTURE_LOCK.aaf				
				Original Sound	Rushes Drive	Copied fol			
				QT_300px_Preview_422	"220110_VILLAIN.mov"				
				Sound AAF	"220110_VILLAIN_complete.aaf"				
		VFX	Stringout	"220110_VILLAIN.aaf"					
				"Villain_Sync_Stringout_Sync.edi"					
				"Villain_Sync_Stringout.aaf"					
				"Villain_Sync_Stringout.edi"					
VILLAIN CREW FILES	VILLAIN PRODUCTION FILES	VFX	MIDAS DRIVE	EXRs	VFX GRIDS	EXR export			
					VFX FULLORDER	EXR export			
					VFX REFS	EXR export			
				MIDAS EXRs	EXR frame exports of all VFX shots before and after VFX additions				
				Midas Fire Recomp	EXR frame exports of one additional VFX shot				
		Resources	VILLAIN_SHR	Various files used for visual reference to					
			VILLAIN Cave Element	Various camera footage clips of mounta					
			VILLAIN Dragon Faces	Literally videos of me acting out faces t					
			VILLAIN Hot Fire Add	EXR files used in late addition VFX shot					
VILLAIN CREW FILES	VILLAIN PROMO	Behind the scenes photographs shot during film							
		ITS and SHRs							
		POSTER							
		SCREENSHOTS							
		TRAILER							
		MOV files and PCP project files for the film's promotional trailer							
		AAF link to							
		DNX36 1920 x 1080 QT with sound							
		Title MXF's							

Future: Open Test Patterns

- Library for 2D test pattern generation
- Contributed by **JD Vandenberg**
- **Portable dynamic extensible** generation of **standard reference** images
- Outputs in any image format (**OIO**) and color space (**OCIO**)
- Many possible front-ends, including hosted site, PyPI, static packaged outputs, etc
- Consensus high-value project, **considering best home**



Future: MaterialX Stirling

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- High fidelity production asset from **Pixar**
- Validation for arbitrary **MaterialX BSDF** networks in **Renderman XPU**
- Derived from **Finn** asset from **Cars** franchise
- But what about that license? ...



License

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License for <Asset Name> (the “Asset Name”).

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...

License for Moana Island Scene

Copyright 2017-2022 Disney Enterprises, Inc. All rights reserved.

Redistribution and use of this scene description, with or without modification, are permitted provided that the following conditions are met:

1. The scene description or any part of it **may only be used for research or software development (including benchmarking) purposes.**

...

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Areas the project could use help on

- Soliciting assets or asset ideas
- New contributors
- Participating organizations
- USD web development

Feedback on working with ASWF

- Numerous collaboration opportunities
 - MaterialX, OpenPBR, USD-WG, OpenTimelineIO
 - Adobe, Apple, Autodesk, AWS, DWA, Intel, NAS, NVIDIA, Pixar
 - ASC, AOUSD, AOMedia
- LF Infrastructure and Marketing

TAC Open Discussion